

## **CLAIMS**

What is claimed is:

1. A method, comprising:  
  
determining a correlation value between the scanned image and an original digital image, wherein the scanned image is included in a digital file; and  
  
generating a signal indicating whether the correlation value exceeds a threshold.
2. The method of claim 1, wherein determining a correlation value between the scanned image and an original digital image comprises performing a pixel-by-pixel comparison of a property of the original digital image and the scanned image.
3. The method of claim 1, wherein determining a correlation value between the scanned image and an original digital image comprises computing a cross-product of the original digital image the scanned image.
4. The method of claim 1, wherein determining a correlation value between the scanned image and an original digital image comprises calculating the variance between a property of corresponding pixels in the original digital image and the scanned image.

5. The method of claim 4, wherein determining a correlation value between the scanned image and an original digital image comprises calculating a higher-order difference between a property of corresponding pixels in the original digital image and the scanned image.
6. The method of claim 1, wherein determining a correlation value between the scanned image and an original digital image comprises computing the sum of the pixel-by-pixel multiplication of a property of corresponding pixels in the original digital image and in the scanned image.
7. The method of claim 1, wherein generating a signal if the correlation value exceeds a threshold comprises comparing a computed correlation value to a predetermined threshold.
8. The method of claim 7, wherein comparing a computed correlation value to a predetermined threshold comprises comparing an  $n^{\text{th}}$  order statistic between a property of corresponding pixels in the original digital image and the scanned image to a predetermined variance parameter.
9. The method of claim 8, wherein the property comprises a grayscale value of a pixel.

10. The method of claim 8, wherein the property comprises a value indicating a color of a pixel.
11. The method of claim 7, wherein comparing a computed correlation value to a predetermined threshold comprises comparing the sum of the pixel-by-pixel multiplication of a property of corresponding pixels in the original digital image and the scanned image to the sum of the square of the original digital image.
12. The method of claim 11, wherein the property comprises a grayscale value of a pixel.
13. The method of claim 11, wherein the property comprises a value indicating a color of a pixel.
14. The method of claim 1, further comprising implementing a calibration process to generate a calibration correlation value to compensate for an error introduced by a scanning process implemented to produce the scanned image.

15. The method of claim 14, wherein the calibration process comprises:
- printing a copy of the original digital image;
  - scanning the printed copy of the original digital image;
  - calculating a calibration correlation value between the original digital image and the scanned copy of the original digital image.
16. The method of claim 15, further comprising subtracting the calibration correlation value from the correlation value between the scanned image and an original digital image.
17. A computer-readable medium comprising logic instructions that, when executed on a processor, cause a computing device to implement the method of claim 1.
18. A computer-readable medium having computer-executable instructions that, when executed, direct a computer to:
- compare properties of an original digital image to properties of a scanned image of the original digital image; and
  - generate a signal if a correlation value between properties of the original digital image and properties of the scanned image exceeds a threshold.

19. The computer-readable medium of claim 18, wherein the computer-executable instructions that, when executed, direct a computer to compare properties of an original digital image to properties of a scanned image of the original digital image comprise instructions that, when executed, direct a computer to perform a pixel-by-pixel comparison of a property of the original digital image and the scanned image.

20. The computer-readable medium of claim 18, wherein the computer-executable instructions that, when executed, direct a computer to compare properties of an original digital image to properties of a scanned image of the original digital image comprise instructions that, when executed, direct a computer to compute a histogram representing differences in a property of the original digital image the scanned image.

21. The computer-readable medium of claim 18, wherein the computer-executable instructions that, when executed, direct a computer to compare properties of an original digital image to properties of a scanned image of the original digital image comprise instructions that, when executed, direct a computer to calculate an  $n^{\text{th}}$ -order statistic between a property of corresponding pixels in the original digital image and the scanned image.

22. The computer-readable medium of claim 18, wherein the computer-executable instructions that, when executed, direct a computer to compare properties of an original digital image to properties of a scanned image of the original digital image comprise instructions that, when executed, direct a computer to compute the sum of the pixel-by-pixel multiplication of a property of corresponding pixels in the original digital image and the scanned image.

23. The computer-readable medium of claim 18, wherein the computer-executable instructions that, when executed, direct a computer to generate a signal if a correlation value between properties of the original digital image and properties of the scanned image exceeds a threshold comprise instructions that, when executed, direct a computer to compare an  $n^{\text{th}}$  order statistic between a property of corresponding pixels in the original digital image and the scanned image to a predetermined variance parameter.

24. The computer-readable medium of claim 23, wherein the property comprises a grayscale value of a pixel.

25. The computer-readable medium of claim 23, wherein the property comprises a value indicating a color of a pixel.

26. The computer-readable medium of claim 18, wherein the computer-executable instructions that, when executed, direct a computer to generate a signal if a correlation value between properties of the original digital image and properties of the scanned image exceeds a threshold comprise instructions that, when executed, direct a computer to compare the sum of the pixel-by-pixel multiplication of a property of corresponding pixels in the original digital image and the scanned image to a the sum of the square a property of the original digital image.

27. The computer-readable medium of claim 26, wherein the property comprises a grayscale value of a pixel.

28. The computer-readable medium of claim 26, wherein the property comprises a value indicating a color of a pixel.

29. A computer program product comprising logic instructions executable on a processor, wherein the logic instructions comprise:

a scaling module that scales at least one of a first image file and a second image file such that the files are of the same dimensions; and

a correlation module that determines a correlation value between the first image file and the second image file, and generates a signal indicating whether the correlation value exceeds a threshold.

30. The computer program product of claim 29, wherein the scaling module comprises logic instructions that instruct a processor to:

divide an image file into a plurality of blocks, wherein each block includes a plurality of parameter values; and

compute an average of the parameter values in the plurality of blocks.

31. The computer program product of claim 30, wherein the scaling module comprises logic instructions that instruct a processor to:

apply a threshold to the average of the parameter values in the plurality of blocks.



32. The computer program product of claim 30, wherein the correlation module comprises logic instructions that instruct a processor to compute a variance between the first image file and the second image file.

33. The computer program product of claim 30, wherein the correlation module comprises logic instructions that instruct a processor to compute a cross-product of the first image file and the second image file.

34. The computer program product of claim 30, further comprising a calibration module that includes logic instructions that instruct a processor to compute a calibration correlation value between the first image and a third image file.

35. The computer program product of claim 34, wherein the correlation module comprises logic instructions that instruct a processor to subtract the calibration correlation value from the correlation value between the first image file and the second image file.